

REMARKS

By the foregoing amendment, applicant has carefully reviewed the Examiner's rejections under 35 U.S.C 112 and provided corrective amendments. For example, in claim 17 the amendment now recites "antivirus activity" and further recites an antivirus effective amount of an inorganic derivative containing at least one of silver, silver salts and silver containing complexes. Support, for such amendments are found in the original disclosure for example, in the first paragraph on page 1 of the specification. Claim 20 additionally recites that the plastic composition is initially present as a solid molding compound in the form of powder, tablets, pellets or granules before forming into a molded product, with support being found in the paragraph bridging pages 1-2 of the original specification. Claim 21 has been amended to recite that the plastic composition is applied as a dry constituent in a powder coating including the step of applying the powder coating to the product. Support for such limitation can be found in the second full paragraph on page 3 of the original specification. Dependent claim 24 has been amended to include to the step of applying the thermosetting resin to the product in liquid form as a lacquer or paint, with support also being found in the second full paragraph on page 3 of the original specification. Claim 30 has been amended to delete the "preferable parts by weight" which has been resubmitted as new dependent claims 34 and 35. New dependent claim 33 further limits independent claim 17 antivirus effective amounts to an anti-SARS coronavirus effective amount, with support also being found in the original specification, for example on the second full paragraph on page 1 thereof. Accordingly, none of the other forgoing amendments raise the issue of new matter.

Reconsideration of the previous rejection and objections are respectfully requested.

Specifically claim 17 no longer recites coronavirus which has been resubmitted as claim 33, dependent on claim 17. The typographical error of molded, lacquered, or painted product has been corrected in claim 17. Also the typographical error in spelling "flour" in

claim 23 has also been corrected. Therefore, withdrawal of the rejection is respectfully requested.

Reconsideration and withdrawal of the previous rejection of claims 17-32 under 35 U.S.C. 112, second paragraph, is respectfully requested in view of the foregoing amendment and the following comments. The objectionable term “even against SARS coronavirus” in claims 17 and 32 have been removed. Additionally, applicant has amended independent claim 17 to state an antivirus effective amount of an inorganic derivative containing at least one of silver, silver salts and silver containing complexes which avoids Examiner’s previous rejections. The specification, specifically page 4, fourth full paragraph provides exemplary amounts of such inorganic derivatives, but of course, new claim 17 is not limited to such exemplary amounts but claims all antivirus effective amounts. The previous objections to claims 24 and 28 have also been avoided by cancellation of the objected to language. Accordingly, withdrawal of the previous rejection of the claims under 35 U.S.C 112, second paragraph, is respectfully requested.

Reconsideration and withdrawal of all the prior art rejections are respectfully requested in view of the following comments.

With regard to all the rejections made under 35 U.S.C. 102 (b) as anticipatory, applicant reminds the Examiner that the rejection of anticipation is very specific and in fact the USPTO has promulgated guidelines for the Examiners in MPEP 2131 which states, *inter alia* “a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior reference”. The section continues “the identical invention must be shown in as complete detail as contained in the...claim” (citations omitted). It is clear that none of Laurin et al (U.S. Patent 4,603,152), Gueret et al (U.S. Patent 5,393,809) nor the evidence of the *United States Department of Labor, Occupational Safety & Health Administration (OSHA)*, Asai et al (U.S. Patent 5,137,957), Ohsumi et al (U.S. Patent 5,698,229), Mocchia et al (WO 2001/79349) also as evidenced by

United States Department of Labor, Occupational Safety & Health Administration (OSHA) teach any method for providing a molded, lacquered, painted or dry coated product with a surface having antivirus activity. This is expressly acknowledged by the Examiner in each of the purported anticipatory rejections based on the above-noted references.

In some of the rejections, the Examiner apparently equates “antibacterial” properties with “antiviral properties”. However, there is a well established body of medical evidence that shows that bacteria and viruses are not affected, nor responsive, to the same or similar treatments. For example, there are a whole host of antibiotic drugs which have remarkable effect against bacteria but all of which prove ineffective against viruses. Thus, what may be an effective antibacterial is neither inherently nor explicitly an antiviral agent. Thus, such rejection based on the antibacterial effect of certain compounds and/or compositions cannot establish a case of anticipation for a method of providing a molded, lacquered, painted or dry coated product with a surface having antivirus activity in which a plastic composition comprising an antivirus effective amount of an inorganic derivative containing at least a silver component as in independent claim 17 can be established.

Secondly, it is clear that the Examiner does not understand the concept of “inherency” as it is used in the context of anticipation. This is exemplified by the Examiner’s statement that “urea-formaldehyde resin will release formaldehyde”, and it is the Examiners position that the resin disclosed [by some of the references] will inherently release formaldehyde”. A urea-formaldehyde resin will release formaldehyde only if there is an excess of formaldehyde i.e., more than the stoichiometric amount necessary to make the urea-formaldehyde resin, or in other words that there is free formaldehyde not chemically combined with the urea in forming the urea-formaldehyde resin. Applicant clearly discloses the existence of the presence of free-formaldehyde in the claimed invention and the Examiner is invited to the specification at page 2, fourth and fifth full paragraph and the paragraph bridging pages 2-3 of the original specification.

Thus, in the reference in which urea-formaldehyde is present, there can be three possibilities i.e., that all the formaldehyde is reacted i.e., there is an excess of urea and there is no free formaldehyde; there is an exact stoichiometric amount of urea and formaldehyde such that all the formaldehyde is also reacted leaving no free formaldehyde or that there is an excess of formaldehyde i.e., there is free formaldehyde in the product.

Because there are three possibilities, inherency cannot be based on "probability" but must be based on certainty i.e. inevitability. Because the reference is silent as to the presence of free-formaldehyde there is no certainty in the reference that there is an excess of formaldehyde which can be released from the plastic composition. Thus, this is further evidence that the references fail to contain an "inherent" disclosure for the claimed method.

Applicant wishes to emphasize that he is not claiming the compound, i.e. silver, silver salts, or silver containing complexes *per se* but rather a method of use. While the Examiner seems insistent that the compounds i.e. silver, silver salts and silver containing complex may "inherently" pose antiviral activity, however, such antiviral activity has not been reported in the references cited in any of the "anticipatory" rejections and moreover it is not to the claimed compound *per se* but rather to a method of use which is both novel and unobvious.

In the claimed invention a "method for providing a molded, lacquered, painted or dry coated product with a surface having antivirus activity is obtained by the method of at least one of molding a product, lacquering a product, painting a product, or dry coating a product with a plastic composition comprising an antivirus-effective amount of an inorganic derivative...". Because none of the prior art recognize antivirus activity *per se* for the compounds, there is no "inherency" in providing a plastic composition with an antivirus-effective amount of such compounds. While the Examiner refers to a reference such as Laurin et al in column 5, examples 1-3, such examples are provided for antimicrobial coating and there is no disclosure that any of such coatings possess antivirus effective amounts of a plastic composition which is applied by lacquering, painting, dry coating or molding a

product as in the claimed invention. All that Laurin et al teaches is "coated on the exterior and the interior by dipping the connector into the mixture" see column 5, lines 28-30 with no teaching of the specific antimicrobial amount on the product. Such a process is not anticipatory for an antivirus effective amount provided as a lacquer, a paint, or dry coating (or molded product) as in the claimed method. Thus, Laurin et al falls far short as being anticipatory of the claimed invention.

Similarly, the Gureret Patent teaches an "antiseptic agent" (column 2, lines 23-26) which is said to have utility against degradation of a plastic article "either by any microorganisms or by atmospheric oxygen". However, a virus is not a microorganism and again there is no teaching of lacquering, painting or dry coating a product and although the "the antiseptic" agent is bound by impregnation onto a filler which is subsequently mixed with a heat curable resin (column 2, lines 51-64) there is no teaching that the surface of the product has antivirus activity as instantly claimed. In view of the lacking of the teaching of the reference to disclose what is claimed it cannot possibly be anticipatory of the claimed invention.

For all the foregoing reasons, withdrawal of the rejection as based on anticipation are respectfully requested.

Reconsideration and withdrawal of the rejection of claims 25 and 29 under 35 U.S.C. 103 (a) as being unpatentable over Laurin; rejection of claim 30 under 35 U.S.C. 103 (a) as being unpatentable over Gueret et al., as evidence as the *United States Department of Labor, Occupational Safety & Health Administration (OSHA)*; or alternatively over Asai et al; the rejection of claims 26 and 29-30 under 35 U.S.C 103 (a) as being unpatentable over Ohsumi et al; the rejection of claim 24 under 35 U.S.C. 103(a) as being unpatentable over Ohsumi et al in view of Alger; the rejection of claim 28 under 35 U.S.C 103 (a) as being unpatentable over Ohsumi et al and further in view of Lewis (*Hawley's Condensed Chemical Dictionary*); the rejection of claim 28 under 35 U.S.C. 103 (a) as being unpatentable over Mocchia as

evidenced by the *United States Department of Labor, Occupational Safety & Health Administration (OSHA)* in view of Lewis; the rejection of claim 30 under 35 U.S.C. 103 (a) as being unpatentable over Mocchia et al as evidenced by the *United States Department of Labor, Occupational Safety & Health Administration (OSHA)* are all respectfully requested.

As with the alleged case of anticipation, none of the 103 rejections recognize anything but antimicrobial effect and the Examiner has not in any way equated antiviral effect with antimicrobial effect. Thus, there is no teaching of providing an antiviral effective amount on a surface of a molded product, a lacquered product, a painted product or a dry coated product as in the claimed invention. There is no routine skill or experimentation that would lead one from the realm of antimicrobials to the realm of antiviral agents since such materials are notoriously well known to be different and that known antimicrobials have no effect against viral agents. The fact that the instant applicant was the first to recognize the relationship in his method of providing certain products establishes the unobviousness of the invention at the time it was made to those having ordinary skill in the art. Again applicants stress that they are not claiming a compound i.e., the inorganic derivative *per se*, nor are they claiming a thermoplastic *per se* as presumed in the Office Action. Rather, what is being claimed is a method of providing antiviral activity on the surface of articles which is nowhere made obvious by any of the rejections made on the basis of 35 U.S.C. 103 (a). Furthermore, new claim 33 specifically states an “anti-SARS coronavirus effective amount” which is nowhere hinted at in any of the cited prior art references.

For all the forgoing reasons applicant respectfully requests withdrawal of all objections and rejections and passage of the application to issue.

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The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 14-1437, under Order No. 8688.050.US0000

Respectfully submitted,

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